

U.S. DEPARTMENT OF ENERGY
NEVADA OPERATIONS OFFICE

MANUAL

NV M 412.X2

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Expires: 08-22-04

READINESS REVIEW



INITIATED BY:
National Security Support Division

READINESS REVIEW

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1. OBJECTIVE. Defines the requirements for a readiness review program and establishes the DOE Nevada Operations Office (DOE/NV) Hazardous Operations Controller (HOC) Program for activities conducted under the purview of DOE/NV.
2. CANCELLATION. None.
3. APPLICABILITY.
 - a. The provisions of this Order apply to DOE/NV organizational elements.
 - b. The requirements applicable to the DOE/NV contractors, national laboratories, other federal agencies, and other user organizations are contained in the Contractor Requirements Document (CRD), Attachment 1. Compliance with the CRD is required to the extent set forth in a DOE/NV contract or other agreement, e.g., DOE/NV Authorization Agreements or Activity Agreements.
4. EXCLUSION. None.
5. REQUIREMENTS.
 - a. General.
 - (1) Readiness Review plans and criteria shall be developed as early as practicable in the project planning process.
 - (2) Readiness Review shall not be used as a mechanism to assist in or prepare for readiness, but shall be used to confirm readiness.
 - (3) Operational Readiness Reviews (ORR), Readiness Assessments (RA), and Test/Experiment/Operations Control shall be conducted by qualified personnel.
 - (4) The RA process shall use a graded approach; this may be as simple as a startup checklist to as complex as an ORR.
 - (5) The readiness review scope shall be consistent with the scope of the work to be accomplished.
 - b. Facility/Operation. Startup and restart of facilities/operations shall be in accordance with Table 1, or as directed by the DOE/NV Manager.

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**Table 1. READINESS REVIEW TYPES AND APPROVAL AUTHORITIES
FOR FACILITIES/OPERATIONS**

FACILITY/ OPERATION TYPE	STARTUP	RESTART DUE TO SAFETY AND NONSAFETY ISSUES
CATEGORY 1 AND 2 NUCLEAR FACILITY	<ul style="list-style-type: none"> Type: DOE O 425.1A--Mandatory Approval Authority: DOE/NV Manager if delegated to field 	
CATEGORY 3 NUCLEAR FACILITY		
LESS THAN CATEGORY 3 NUCLEAR FACILITY	<ul style="list-style-type: none"> Type: Contractor Processes Approval Authority: Contractor 	If Department of Energy (DOE) shuts down operation: <ul style="list-style-type: none"> Type: DOE/NV RA¹ Approval Authority: Cognizant DOE/NV Director
		If contractor shuts down operation: <ul style="list-style-type: none"> Type: Contractor Processes Approval Authority: Contractor
ACCELERATOR	<ul style="list-style-type: none"> Type: DOE O 420.2--Mandatory 	
FACILITY/OPERATION THAT MEETS OR EXCEEDS REAL ESTATE/OPERATIONS PERMIT RISK MANAGEMENT CRITERIA ² WHICH REQUIRE A READINESS REVIEW	<ul style="list-style-type: none"> Type: DOE/NV RA¹ Approval Authority: DOE/NV Manager 	If DOE shuts down operation: <ul style="list-style-type: none"> Type: DOE/NV RA¹ Approval Authority: Cognizant DOE/NV Director
		If contractor shuts down operation: <ul style="list-style-type: none"> Type: Contractor Processes Approval Authority: Contractor
FACILITY/OPERATION WITH STANDARD INDUSTRIAL HAZARDS	Type: Contractor Process Approval Authority: Contractor	

c. Tests/Experiments/Operations.

- (1) Tests/experiments/operations, as defined in this Directive, shall be controlled by DOE/NV in accordance with Table 2.

¹ DOE O 425.1A, STARTUP AND RESTART OF NUCLEAR FACILITIES, and DOE-STD-3006-00 are guidance.

² DOE M 412.X1, REAL ESTATE/OPERATIONS PERMIT.

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Table 2. DOE/NV CONTROL OF TESTS/EXPERIMENTS/OPERATIONS

Test/Experiment/Operation	Requirements	DOE/NV Controller
Underground Nuclear Weapons Tests	NV Order 56XE.1B	Test Controller
Subcritical Experiments	NV Order 56XG.1 and Chapter I of this Directive, as appropriate	Test Controller/HOC
Tests/Experiments/Operations	Chapter I of this Directive	Hazardous Operations Controller

- (2) Requirements for the DOE/NV HOC program are addressed in Chapter I of this Directive.

6. RESPONSIBILITIES.

- a. DOE/NV Manager. Responsible for all facility/operation safety and the safe conduct of all tests/experiments/operations.
- b. DOE/NV Assistant Managers. Ensures implementation of the appropriate readiness review process for all facilities/operations and tests/experiments/operations under their cognizance.
- c. Project Managers.

- (1) Determine the applicable readiness review type per:
 - (a) Table 1, or as directed by the DOE/NV Manager, for startup and restart of facilities/operations.
 - (b) Table 2 for tests/experiments/operations, or as directed by the DOE/NV Manager.
- (2) Request required support from other DOE/NV elements in a timely manner.
- (3) Coordinate the development and transmittal of requisite correspondence.

7. REFERENCES.

- a. DOE O 420.2, SAFETY OF ACCELERATOR FACILITIES, dated 11-5-98, and Changes thereto.

- b. DOE O 425.1A, STARTUP AND RESTART OF NUCLEAR FACILITIES, dated 12-28-98.
- c. NV M 412.X1B, REAL ESTATE/OPERATIONS PERMIT, dated 8-22-00.
- d. NV Order 56XE.1B, UNDERGROUND NUCLEAR TESTING, dated 10-10-96.
- e. NV Order 56XG.1, SUBCRITICAL EXPERIMENTS, dated 6-16-97, and Changes thereto.
- f. DOE-STD-3006-00, *Planning And Conduct of Operational Readiness Reviews (ORR)*.
- g. 10 CFR 830, *Nuclear Safety Management*.

8. DEFINITIONS.

- a. Facility/Operations. This term, as used in this Directive, means buildings and other structures; their functional systems and equipment; and other fixed systems and equipment installed therein, including site development features outside the plant, such as landscaping, roads, walks, parking areas, outside lighting, and communications systems; and use of open real estate.
- b. Graded Approach. A process by which the level of analysis, documentation, and actions necessary to comply with a requirement are commensurate with:
 - (1) The relative importance to safety, safeguards, and security;
 - (2) The magnitude of any hazard involved;
 - (3) The life cycle stage of a facility;
 - (4) The programmatic mission of a facility;
 - (5) The particular characteristics of a facility; and
 - (6) Any other relevant factor.

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- c. Hazardous Operations Controller. A DOE/NV employee who has been certified in accordance with the DOE/NV qualification standard for this position. The HOC exercises operational control during the conduct of tests/experiments/operations.
 - d. Operations and Safety Plan. A plan developed for tests/experiments/operations to identify operational requirements and controls of potential adverse consequences to the participants and any nearby activities/personnel that could potentially be affected.
 - e. Readiness Review. A term used in this Directive to collectively refer to ORRs conducted for nuclear facilities Category 1, 2, and 3; RAs conducted for nuclear facilities not requiring an ORR and nonnuclear facilities/operations; Accelerator Readiness Reviews; specific contractor processes relating to readiness confirmation; and the Test Controller/HOC program.
 - f. Safety Panel. A panel of technical experts used to provide technical review, advice, and recommendations to a Test Controller or HOC regarding the Operations and Safety Plan development and execution.
 - g. Tests/Experiments/Operations. Activities that initiate actions that involve the intentional release of energy or hazardous material for the purpose of research, test, development, evaluation, or other data collection purposes that requires area control outside the real estate covered by the REOP or air space closure above 14,000 feet mean sea level..
 - h. Test Controller. A DOE/NV employee who has been certified in accordance with the DOE/NV qualification standard for this position. The Test Controller exercises operational control during the conduct of an Underground Test or Subcritical Experiment.
9. CONTACT. DOE/NV Director, National Security Support Division (NSSD), at (702) 295-3128.



Kathleen A. Carlson
Manager

CHAPTER I

DOE/NV HOC PROGRAM

1. OBJECTIVE. Establish the DOE/NV HOC Program. This program shall be designed to ensure trained, qualified federal technical personnel are available to exercise operational control of hazardous tests/experiments/operations at the Nevada Test Site (NTS), which have been determined to require an HOC. In such instances, DOE/NV will exercise control over the final authorization to conduct a specific tests/experiments/operations.
2. REQUIREMENTS.
 - a. General.
 - (1) For tests/experiments/operations:
 - (a) An Operations and Safety Plan shall be developed.
 - (b) A safety panel shall be formed.
 - (c) The Operations and Safety Plan shall be reviewed and approved.
 - (d) Tests/experiments/operations execution shall be controlled in accordance with the approved Operations and Safety Plan
 - (e) Issues that cannot be resolved at the working level shall be raised to upper management for a decision.
 - (2) Operational Safety Plan Review.
 - (a) The Operational Safety Plan shall be reviewed by the safety panel.
 - (b) The safety panel chairman shall ensure the resolution of any issues and sign the Operational Safety Plan.
 - b. Test/Experiment/Operations Execution.
 - (1) The HOC and safety panel shall review documentation and facility/operational conditions to include, as appropriate:

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- (a) Technical summary of the operation.
 - (b) Confirmation of technical readiness by the DOE/NV Program/Project Manager.
 - (c) Status of completed actions required by the Operations Plan.
 - (d) Status of preparation for future actions required by the Operations Plan.
 - (e) Area Control Plans, including closed areas, controlled areas, and personnel numbers and locations.
 - (f) Airspace Control Plans.
 - (g) Predicted meteorological conditions.
 - (h) Proposed reentry procedures.
 - (i) Coordination requirements with other NTS users.
 - (j) Communication Frequency requirements.
 - (k) Applicable agreements.
 - (l) Other safety interests, to include emergency management considerations.
 - (m) Security Interests.
 - (n) Public Affairs Interest.
- (2) The safety panel chairman or designee shall be present to evaluate the adequacy of preparations in accordance with the defined criteria and provide verbal recommendation to execute the test/experiment/operation.
 - (3) The HOC shall ensure the readiness to conduct the test/experiment/operation and provide the final verbal authorization to the contractor/user to execute the test/experiment/operation.

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- (4) Execution of the test/experiment/operation shall require verbal concurrence of the safety panel chairman or designee.
- (5) A record shall be made of the safety panel chairman or designee recommendation, and the HOC final authorization.

3. RESPONSIBILITIES.

- a. DOE/NV Assistant Manager for National Security. Establishes the HOC program, described in Chapter I of this Manual, which serves all DOE/NV organizations.
- b. DOE/NV NSSD.
 - (1) Manages and administers the HOC Program.
 - (2) Ensures the development of an HOC qualification standard.
 - (3) Assigns a safety panel chairman.
- c. Division Directors.
 - (1) Assigns HOCs for specific hazardous operations.
 - (2) Approves the test/experiment/operation Operations and Safety Plan.
- d. Hazardous Operations Controller.
 - (1) Ensures the decision making process is fully objective.
 - (2) Develops and document test specific criteria relevant to the identified hazards an Operations and Safety Plan.
 - (3) Acquires additional subject matter experts, as needed, to assist in the development of the Operations and Safety Plan.
 - (4) acquires the signature of the safety panel chairman on the Operations and Safety Plan.

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- (5) Executes the test/experiment/operation in accordance with the Operations and Safety Plan.
- (6) Exercises operational control of assigned hazardous operations until a safe reentry or return to normal operations is accomplished.
- (7) Maintains close coordination with the Site Operations Center until the test/experiment/operation has concluded.
- (8) Raises issues that cannot be resolved to upper management for a decision.

e. Safety Panel Chairman.

- (1) Selects the appropriate technical experts to serve as safety panel members to review the Operations and Safety Plan and provide comments.
- (2) Concurs with the final Operations and Safety Plan.
- (3) Determine the need for onsite safety panel representation to support the test/experiment/operation.

f. Safety Panel.

- (1) Reviews the operational safety plan and provides comments to the safety panel chairman.
- (2) Support the test/experiment/operation as requested by the safety panel chairman with technical advice and recommendations regarding execution.
- (3) If execution does not occur, reconvene, as necessary, until issues are resolved and an execution can take place.

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Attachment 1
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CONTRACTOR REQUIREMENTS DOCUMENT

Contractors, national laboratories, other federal agencies, and other user organizations shall implement the following requirements.

1. GENERAL.

- a. Readiness Review plans and criteria shall be developed as early as practicable in the project planning process.
- b. Readiness Review shall not be used as a mechanism to assist in or prepare for readiness, but shall be used to confirm readiness.
- c. Readiness Reviews shall be staffed with personnel who have appropriate expertise and appropriate objectivity.

2. FACILITIES.

- a. Startup and restart of facilities shall be in accordance with Table 1 of this Directive, or as directed by the DOE Nevada Operations Office (DOE/NV) Manager.
- b. Establish procedures that define the process for conducting a Readiness Assessment, tests/experiments/operations.
- c. Tests/experiments/operations as defined in this Directive shall be controlled by DOE/NV in accordance with Table 2 of this Directive.
- d. Organizations conducting tests or experiments shall provide appropriate planning documentation, technical briefings, and independent technical experts to the DOE/NV Hazardous Operations Controller and safety panel.